Summary: The inventions listed below are owned by an agency of the U.S. Government and are available for licensing in the U.S. in accordance with 35 U.S.C. 207 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

Addresses: Licensing information and copies of the U.S. patent applications listed below may be obtained by writing to the indicated licensing contact at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, Rockville, Maryland 20852–3804; telephone: 301/496–7057; fax: 301/402–0220. A signed Confidential Disclosure Agreement will be required to receive copies of the patent applications.

Erythroid Progenitor Cell Line for Hematological Disease Applications

Description of Invention: Plasmodium vivax (malaria) is a significant health concern in many parts of Asia, Latin America, North Africa, and the Middle East. There is a lack of continuous culture systems for this pathogen. The subject technology is an erythroid progenitor continuous cell line (termed CD36E) identified by erythroid markers CD36, CD33, CD44, CD71, CD235, and globoside. These CD36E cells are heterozygous for Fya and Fyb (Duffy antigen). Due to recent evidence that Plasmodium vivax (P. vivax) can infect erythroid progenitor cells (reference: YX Ru et al. and T Panichakul et al.), these cells can be potentially used for culturing P. vivax and other species of malaria. This in turn could aid development of malaria related treatments and/or products. In addition, the cell line can also be used for other hematological disease applications that involve red blood cells or red blood cell precursors. The CD36E cells also produce alpha, beta, and chi hemoglobin and therefore may be used for research involving hemoglobin.

Applications:
- Culture system for Plasmodium species (malaria)
- Hematological diseases
- Advantages: Immortalized erythroid progenitor cell line.

Development Status: In vitro data can be provided upon request.

Market:
- Malaria
- Anti-malaria drug screening
- Hematological diseases
- Hemoglobin

Inventors: Susan Wong, Neal S. Young, Ning Zhi (NHBLI).

Relevant Publications:


Licensing Status: Available for biological materials licensing.

Licensing Contact: Kevin W. Chang, Ph.D.; 301–435–5018; changke@mail.nih.gov.

Collaborative Research Opportunity: The National Heart Lung and Blood Institute, Hematology Branch, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize the CD36E cell line. Please contact Cecilia Pazman, Ph.D., at pazzmane@mail.nih.gov for more information.

Parvovirus B19 Codon Optimized Structural Proteins for Vaccine and Diagnostic Applications

Description of Invention: Parvovirus B19 (B19V) is the only known pathogenic human parvovirus. Infection by this viral pathogen can cause transient aplastic crisis in individuals with high red cell turnover, pure red cell aplasia in immunosuppressed patients, and hydrops fetalis during...
pregnancy. In children, B19V most commonly causes erythema infectiosum, or fifth’s disease. Infection can also cause arthropathy and arthralgia. The virus is very erythrotropic, targeting human erythroid (red blood) progenitors found in the blood, bone marrow, and fetal liver. Currently, there are no approved vaccines or antiviral drugs for the treatment or prevention of B19V infection.

The subject technology is a series of plasmid constructs with codon optimized B19 viral capsid genes (VP1 and VP2) that can be expressed in mammalian cells. Transfection of vectors encoding these optimized VP1 and VP2 genes into different mammalian cell lines, including 293, Cos7, and Hela cells produce virus-like particles (VLPs). The vectors include bicistronic plasmids expressing the VP1 and VP2 proteins at different ratios to produce B19V VLPs with optimal antigenicity for vaccine applications. This technology can also be used for diagnostic applications and development of a viral packaging system for producing infectious B19V virus.

**Applications:**
- VLPs based vaccines for the prevention and/or treatment of B19V infection
- DNA based vaccines for the prevention and/or treatment of B19V infection
- B19V diagnostics
- Viral packaging system

**Advantages:**
- Codon optimized VP1 and VP2 genes for better expression in mammalian cell lines
- Expression of B19V VLPs from “nonpermissive” cell lines

**Development Status: In vitro data can be provided upon request.**

**Market:**
- B19V vaccines (VLPs and DNA)
- B19V diagnostics

**Inventors:** Ning Zhi, Sachiko Kajigaya, and Neal S. Young (NHLBI).


**Licensing Status:** Available for licensing.

**Licensing Contact:** Kevin W. Chang, Ph.D.; 301–435–5018; changke@mail.nih.gov.

**Collaborative Research Opportunity:** The National Heart Lung and Blood Institute, Hematology Branch, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize the subject technology. Please contact Cecilia Pazman, Ph.D., at pazmance@mail.nih.gov for more information.

**Optimized Expression of IL–12 Cytokine Family**

**Description of Invention:** The IL–12 family of cytokines (IL–12, IL–23, and IL–27) has an important role in inflammation and autoimmune diseases. IL–12 is produced by macrophages and dendritic cells in response to certain bacterial and parasitic infections and is a powerful inducer of IFN-γamma production. IL–23 is proposed to stimulate a subset of T cells to produce IL–17, which in turn induce the production of proinflammatory cytokines that lead to a protective response during infection. IL–27 appears to have dual functions as an initiator of TH1-type (cellular immunity) immune responses and as an attenuator of immune/inflammatory responses.

The present inventions provide methods for improved expression of multimeric proteins by engineering different ratios of the subunit expression units in a cell or upon expression from a multi-promoter plasmid having different strength promoters. The inventors have improved the levels and efficiency of expression of the IL–12 family of cytokines, which includes IL–12, IL–23, and IL–27, by adjusting the transcription and translation of the alpha and beta subunits that comprise the heterodimeric proteins. Optimal ratios of expression for the two (2) subunits were determined for IL–12, IL–23, and IL–27.

**Applications:**
- Tumor treatment
- Anti-viral therapy
- Anti-inflammatory therapy

**Advantages:** Increased expression and stability of in vitro expressed IL–12, IL–23 and IL–27 cytokines

**Development Status:** In vitro data and data in animal models can be provided upon request.

**Market:**
- Infectious Diseases
- Cancer
- Inflammatory Diseases

**Inventors:** George N. Pavlakis and Barbara K. Felber (NCI).


**Licensing Status:** Available for licensing.

**Licensing Contact:** Kevin W. Chang, Ph.D.; 301–435–5018; changke@mail.nih.gov.

**Collaborative Research Opportunity:** The Center for Cancer Research, Human Retrovirus Section, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize delivery of cytokines of the IL–12 family in cancer and other indications. Please contact John D. Hewes, Ph.D. at 301–435–3121 or hewesj@mail.nih.gov for more information.

**Radiotracers for Imaging Cannabinoid Sub-Type 1 (CB1) Receptor**

**Description of Invention:** The present invention relates to novel radiolabeled compounds for imaging cannabinoid sub-type 1 (CB1) receptors in brains of mammals, particularly humans, using positron emission tomography (PET) or single photon emission computed tomography (SPECT). These radiotrigens can be used in clinical research, diagnostics, or drug discovery and development, in that, they permit understanding of the role of CB1 receptors in neuropsychiatric disorders such as Parkinson’s disease, Huntington’s disease, Alzheimer’s disease, multiple sclerosis, depression, mood disorder, anxiety, schizophrenia, drug addiction, alcohol disorder, obesity and anorexia.

**Applications:**
- In vivo imaging of CB1 receptor in mammals, particularly humans
- Diagnostic imaging of CB1 receptors in subjects having a neurological, neuropsychiatric, neurodegenerative or other condition and treatment
- Pharmaceutical composition
- Diagnostic kits

**Advantages:** The principal radioligand under the claim is effective for imaging CB1 receptors in vivo with PET.

**Development Status:** Primary radioligand has been evaluated in non-human primates with PET.

**Market:** Radioligands may be useful for performing drug occupancy studies of CB1 receptors, and for neuropsychiatric studies and investigations with imaging techniques (e.g., PET or SPECT).

**Inventors:** Victor W. Pike (NIH).

**Relevant Publications:**
2. SR Donohue, VW Pike, SJ Finnema, P Truong, J Andersson, B Gulyás, C Halldin. Discovery and labeling of high affinity 3,4-diarylpyrazolines as...

License Status: Available for licensing.

License Contact: Susan Ano, PhD; 301–435–5515; anos@mail.nih.gov.


Richard U. Rodriguez,
Director, Division of Technology Development and Transfer, Office of Technology Transfer, National Institutes of Health.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Eye Institute; Amended Notice of Meeting

Notice is hereby given of a change in the meeting of the National Eye Institute Special Emphasis Panel, April 20, 2010, from 3 p.m. to April 20, 2010, 4 p.m., National Eye Institute, 5635 Fishers Lane, 1300, Bethesda, MD 20892 which was published in the Federal Register on April 21, 2010 Vol 75; Number 76.

The meeting will be held on May 20, 2010, at 2:30 p.m. The meeting is closed to the public.


Jennifer Spaeth,
Director, Office of Federal Advisory Committee Policy.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Member Conflict: Alcohol.

Date: May 20, 2010.

Time: 1 p.m. to 2:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Telephone Conference Call).

Contact Person: Michael Selmanoff, PhD, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3134, MSC 7844, Bethesda, MD 20892, 301–435–1119, mselmanoff@csr.nih.gov.

This notice is being published less than 15 days prior to the meeting due to the timing limitations imposed by the review and funding cycle.


Jennifer Spaeth,
Director, Office of Federal Advisory Committee Policy.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Eunice Kennedy Shriver National Institute of Child Health & Human Development; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Child Health and Human Development Initial Review Group Developmental Biology Subcommittee.

Date: June 10–11, 2010.

Time: 8 a.m. to 4 p.m.

Agenda: To review and evaluate grant applications.

Place: Embassy Suites at the Chevy Chase Pavilion, 4300 Military Road, NW., Washington, DC 20015.

Contact Person: Norman Chang, PhD, Scientific Review Officer, Division of Scientific Review, National Institute of Child Health and Human Development, NIH, 6100 Executive Blvd., Room 5B01, Bethesda, MD 20892, (301) 496–1485, changn@mail.nih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.864, Population Research; 93.865, Research for Mothers and Children; 93.929, Center for Medical Rehabilitation Research; 93.209, Contraception and Infertility Loan Repayment Program, National Institutes of Health, HHS)


Jennifer Spaeth,
Director, Office of Federal Advisory Committee Policy.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Center for Complementary & Alternative Medicine; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Center for Complementary and Alternative Medicine Special Emphasis Panel; Loan Repayment Program.

Date: May 17, 2010.

Time: 8 a.m. to 5 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Two Democracy Plaza, 6707 Democracy Boulevard, Bethesda, MD 20892 (Telephone Conference Call).

Contact Person: Peter Kozel, PhD, Scientific Review Officer, NCCAM, 6707 Democracy Boulevard, Suite 401, Bethesda, MD 20892–5475, 301–496–8004, kozelp@mail.nih.gov.

This notice is being published less than 15 days prior to meeting due to scheduling conflicts.

(Catalogue of Federal Domestic Assistance Program Nos. 93.213, Research and Training in Complementary and Alternative Medicine, National Institutes of Health, HHS)